

Piffard (H. G.)

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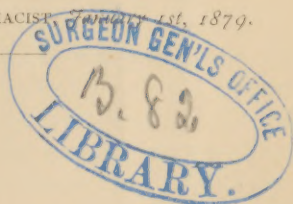
ON THE
TREATMENT OF STRICTURES
OF THE
FOSSA NAVICULARIS

BY

HENRY G. PIFFARD, M. D.,

Professor of Dermatology, University of the City of New York; Surgeon to Charity
Hospital, etc., etc.

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TREATMENT OF STRICTURES OF THE FOSSA NAVICULARIS.

It is only of recent years that much attention has been paid to strictures of moderate calibre, located in immediate neighborhood of the meatus. For many years incipient stricture was rarely noticed, and it was only when the fact that obstinate gleet so frequently depended on stricture that surgical attention was closely directed to these early lesions. Unless the patient complained of the more obvious symptoms of stricture the physician rarely thought it worth while to even make an explorative examination, but endeavored to cure the gleet with copaiva, etc., aided or not by urethral injections. If, however, the stricture had already progressed so far that evidences of mechanical obstruction were present, the physician was satisfied with the English practice of dilating up to No. 10 or 12 (English scale); even those who went higher rarely thought of using an instrument that would not readily pass the meatus. If an ordinary sound of say No. 12 would not pass an eighth of an inch into the canal, the next number lower was taken as the gauge of the normal urethra and dilatation proceeded only thus far. Since, however, Dr. Otis has so strongly insisted on the importance of attention to strictures of large calibre, and since diagnostic facilities have been increased, more attention has been paid to strictures in the anterior portion of the canal, and, as a consequence, they are more frequently noticed. Fifty years ago statistics declared that strictures in this region occurred in only about ten or fifteen per cent. of cases. Later observers placed the ratio higher, and now it may be safely affirmed that in fifty per cent. of all stricture cases, stricture is present in some portion of the fossa, existing either alone or with additional strictures elsewhere. Under the term stricture we do not here include congenital stenosis of the meatus, but true pathological lesions resulting from gonorrhœa, masturbation, injury, or other causes. The comparative frequency with which strictures of this region have come under our notice in hospital and private practice, led to an endeavor to simplify and render more convenient the instruments necessary for their diagnosis and treatment. The result has been the arrangement of a set of Fossal Stricture instruments, the construction and uses of which will be detailed below. It may here be stated that not a single one of the instruments is wholly original with the writer, but are modifications or adaptations of pre-existing instruments, some of them pre-

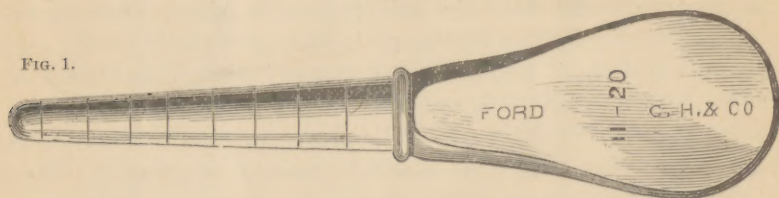
viously designed for other purposes. Heretofore, in the treatment of strictures of this region, surgeons have mainly availed themselves of instruments designed for the deeper portions of the canal—instruments which, from their length and shape, will not permit the delicacy of manipulation afforded by shorter rectilinear ones.

As the fossa navicularis extends backward only about three and a half or four centimeters from the meatus, the instruments have been made of a uniform length of five centimeters (two inches), and their calibre is arranged in conformity with the numbers of the American scale, each number of which corresponds to twice the diameter of the instrument expressed in millimeters, e. g. No. 20 means an instrument whose diameter is ten mm.

The treatment of strictures of the fossa navicularis, and the use of the instruments to be described, will be best illustrated by a hypothetical case.

When stricture is suspected, the first point that requires attention is the size of the meatus. Instead of using half a dozen or more ordinary sounds to ascertain this point, it may be often determined in a moment by the use of the meatometer (Fig. 1). This is of steel, nickel-plated, five centimeters in

FIG. 1.



MEATOMETER.

length, and tapering. At its point it corresponds to No. 11, and at its base to No. 20, and each intermediate number is indicated by a circular line. If the instrument is introduced and passes readily into the urethra until tightly grasped by the meatus, the size of this latter is immediately ascertained. If this appears to be normal, the next procedure is to introduce the fossal *bougie à boule* (Fig. 2), likewise of steel and nickel-plated, whose number corresponds to the size of the meatus. If with this instrument no stricture is detected, the examination of the case, so far as fossal stricture is concerned, is at an end, and attention is directed in the usual manner to the investigation of the more deeply seated lesions, with which the present paper has no concern. When the meatus is normal in size, and no stricture is detected with the bougie that just passes it, it is not our custom to incise the meatus in order to permit larger instruments to pass, unless the evidences of stricture are very positive. In this we differ from some other practitioners, notably Dr. Otis, whose views on the subject are well known.

In case, however, the meatometer is arrested before it has fully expanded the lips of meatus, it is withdrawn, and a *bougie à boule* of suitable dimensions is introduced. The set includes fifteen of these, numbered from 10 to 24.

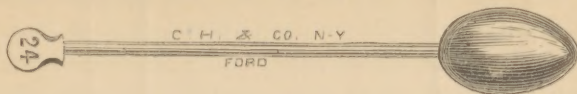
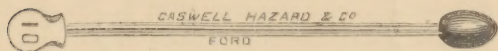


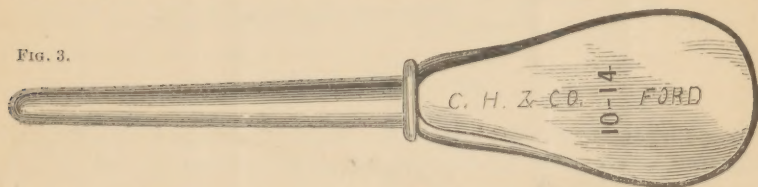
FIG. 2.

BOUGIES À BOULE.



With the bougie the position, the calibre and length of the stricture is determined. This completes the diagnosis. The question of treatment then arises. This confines itself to simple dilatation, incision, or so-called electrolysis. Concerning the latter we will not speak at present. If dilatation is decided

FIG. 3.



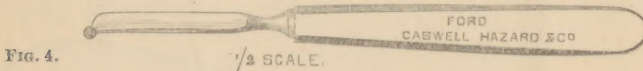
FOSSAL SOUND.

on, a fossal sound (Fig. 3), of suitable dimensions is selected. Of these there are six, each five centimeters in length, tapering, and made of steel, nickel-plated. The smallest one is numbered 10—14, indicating that the point corresponds to No. 10 and the butt to No. 14. The next in size is marked 12—16, and so on to the largest, which is 20—24. With these instruments gradual dilatation is effected, and it requires no argument to show that the requisite force can be applied more conveniently and more accurately than with a sound of the ordinary shape and dimensions.

In many cases, however, gradual dilatation is far from being the most judicious method of treatment, and, as regards strictures located immediately within the meatus, it is extremely unsatisfactory, so far as permanency of result is concerned. This being the case, the question of division of the stricture with a cutting instrument must be considered. The instrument most in vogue for this purpose is the meatotome of Civiale, an instrument ill adapted to the end in view. With it anything like precision is out of the question, the careful surgeon not desiring to cut more than is necessary, rarely cuts enough, and finding it impossible to adjust the instrument with any accuracy, is obliged to introduce it again and again to complete an operation that, with more suitable appliances, could have been finished in a moment. The over-

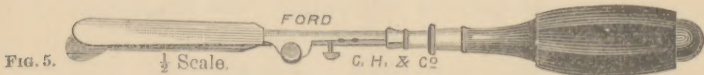
bold surgeon, determined to cut through the entire stricture with one incision, generally does so, and half the time makes an unnecessary hypo-spadias in addition. The necessity of cutting entirely through the constricting band has been thoroughly insisted on by Otis, and we believe to be necessary if a permanent cure is sought. We fail, however, to see the necessity of dividing the entire floor of the urethra in addition, if it can be avoided.

The first instrument specially designed to facilitate the accurate division of strictures in the fossa near the meatus, was the stricture knife of Otis, which is a narrow and probe-pointed scalpel. With this instrument, the tough fibres of the stricture can be felt as they yield to the blade, and when they are all divided the knife is withdrawn. The cutting edge of this knife is convex, which we have not found as satisfactory as a perfectly straight edge, and consequently have our own knife of the shape shown, (Fig. 4,) and of the



FOSSAL STRICTURE KNIFE.

following dimensions; The blade is five centimeters long and six millimeters wide; the cutting edge and back are straight and parallel, and the extremity has a short curve surmounted with a protecting button. A careful trial of both the curved and straight-edged instruments leads us to decidedly prefer the latter. It not unfrequently happens that patients dread the knife, or are unwilling to suffer the pain that they imagine must accompany its use. To obviate this difficulty we have had a urethrotome constructed that is almost painless in its operation. Its shape is shown in the cut, (Fig. 5). The cylin-

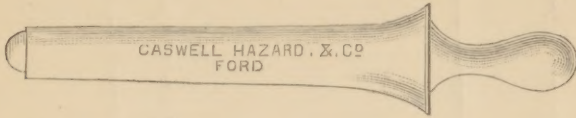


FOSSAL URETHROTOME.

der, five centimeters in length, has a calibre conforming to No. 17, and contains a concealed blade that is made to project, when required, by means of the same mechanism as Civiales' urethrotome, the construction of which is well known. The stricture is first dilated with sounds until the urethrotome will just squeeze through. The blade is then exposed and the instrument rapidly withdrawn, often without the patient being aware that he has been cut. The blade can be adjusted so as to cut from No. 19-22 as desired. After the incision the *bougie à boule* is introduced in order to ascertain whether further incision is necessary. This

is generally the case, but the patient's confidence having been gained, he rarely objects to the completion of the operation with the straight edged knife. The fossal urethrotome then is usually employed as a persuader, and may be regarded as a psychological rather than a surgical instrument. In case hemorrhage should prove annoying, it is controlled in a few moments by the introduction of a fossal sound of suitable dimensions. After section of the stricture the patient daily passes a sound until the wound is healed. Lastly, a couple of meatoscopes (Fig. 6) of different calibres complete the set. These

FIG. 6.



are made of ivory, in order that any uncleanness may be apparent—a matter of some consequence in urethral instruments.

